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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/545,752	04/10/2000	David W. Moore	ST9-99-122	2720

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EXAMINER

PHAM, HUNG Q

ART UNIT

PAPER NUMBER

2172

DATE MAILED: 09/15/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/545,752

Applicant(s)

MOORE, DAVID W.

Examiner

Tam V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-13, 15-21, 23, 24 and 26-31 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.

- 6) ☒ Claim(s) 1-3, 6-13, 15-21, 23-24, and 26-31 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

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DETAILED ACTION

1. Claims 1-3, 6-13, 15-21, 23-24, and 26-31 are pending in this office action. This office action is in response to the supplemental amendment filed date 6/28/03.

Response to Arguments

2. Applicant's arguments with respect to claims 1-3, 6-13, 15-21, 23-24, and 26-31 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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1-3, 6-13, 15-21, 23-24, 26-31
4. Claims ~~1-21~~ and ~~22-31~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Spiro et al. (US 5369757) in view of Korn (US 6542906B2).

With respect to claim 1, Spiro discloses a recovery utility having, a backup copy restore utility configured to read and restore a backup copy of the database data set, (col. 7, lines 55-68); an image copy restore utility configured to apply the detail records to the backup copy during the read and restore of the backup copy to thereby create a restored database data set, (col. 6, lines 65-col. 7, lines 14); a log manager configured to read a log to derive updates subsequent to a merge end point, (col. 8, lines 10-23);

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and a database update manager configured to apply the updates to the restored database data set, (col. 2, lines 23-29).

Spiro discloses the computer 20 process transactions using an "undo" recovery mechanism that provides very fast recovery because only the effects of failed transaction must be undone, (col. 13, lines 59-62). However, Spiro does not teach "a merge end point utility configured to determine the merge end point reflective of a separation of detail and spill records in a log, and a change accumulation manager configured to read a change accumulation data set to derive detail record in parallel with the read and restore of the backup copy". Korn teaches a merge end point utility configured to determine the merge end point reflective of a separation of detail and spill records in a log, (col. 6, lines 21-46), and a change accumulation manager configured to read a change accumulation data set to derive detail record in parallel with the read and restore of the backup copy, (col. 5, lines 12-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Spiro by including a merge end point utility configured to determine the merge end point reflective of a separation of detail and spill records in a log, and a change accumulation manager configured to read a change accumulation data set to derive detail record in parallel with the read and restore of the backup copy as taught in Korn in order to save time when reconstructing a version and space in the backup repository, (col. 2, lines 21-22).

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As claim 2, Spiro further discloses wherein the backup copy restore utility is further configured to read and restore a plurality of backup copies in parallel, (col. 7, lines 55-68)

As claim 3, Korn further discloses wherein the change accumulation manager is further configured to read in parallel a plurality of change accumulation data sets to derive detail records, (col. 5, lines 11-24).

As claim 6, Korn further discloses wherein the log manager is further configured to read a plurality of logs in parallel to derive updates subsequent to the merge end point, (col. 6, lines 21-46).

As claim 7, Spiro further discloses wherein the database update manager is further configured to apply the updates after the backup copy is restored, (col. 2, lines 23-29).

As claim 8, Korn further discloses a virtual memory and wherein the change accumulation manager is further configured to store at least a portion of the detail records in the virtual memory, (col. 5, lines 11-24).

As claim 9, Korn further discloses wherein the backup copy restore utility is configured to send a query to the change accumulation manager for a detail record

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associated with the database data set during the read and restore of the backup copy, (col. 5, lines 11-24).

As claim 10, Korn further discloses wherein the change accumulation manager is configured to save the query if the detail record has not yet been read by the change accumulation manager and further configured to send the detail record to the image copy restore process if the detail record has been read by the change accumulation manager, (col. 5, lines 11-24).

With respect to claim 11, the subject matter of claim 11 is rejected in the analysis above claim 1. Therefore, claim 11 is also rejected for the same reasons as given in claim 1.

As claim 12, Spiro further discloses reading and restoring a plurality of backup copies in parallel, wherein the backup copies are associated with corresponding failed database data sets, (col. 2, lines 23-29).

As claim 13, Korn further discloses further comprising reading a plurality of change accumulation data sets in parallel to derive detail records, (col. 5, lines 11-24).

As claim 15, Spiro further discloses wherein reading the log and applying the updates are executed after restoring the backup copy, (col. 2, lines 23-29).

As claim 16, Korn further discloses reading a plurality of logs in parallel to derive updates subsequent to the merge end point and applying the updates to the restored database data set, (col. 6, lines 21-46).

As claim 17, Korn further discloses determining the merge end point, wherein the merge end point is reflective of a separation of detail and spill records in the log, (col. 6, lines 21-46).

As claim 18, Spiro further discloses storing at least a portion of the detail records in a virtual memory, (col. 5, lines 65-col. 6, lines 9).

As claim 19, Spiro further discloses generating a query to prompt for a detail record associated with the database data set, (col. 8, lines 58-65).

As claim 20, Spiro further discloses the query if the detail record has not yet been read and responding to the query by applying the detail record to the backup copy if the detail record has been read, (col. 8, lines 58-65).

With respect to claim 21, the subject matter of claim 11 is rejected in the analysis above claim 1. Therefore, claim 21 is also rejected for the same reasons as given in claim 1.

As claim 23, Spiro further discloses reading and restoring a plurality of backup copies in parallel, wherein the backup copies are associated with corresponding failed database data sets, (col. 6, lines 65-col. 7, lines 14).

Re claim 24, Korn further discloses wherein the method further comprises reading a plurality of change accumulation data sets in parallel to derive detail records, (col. 5, lines 11-24).

As claim 26, Spiro further discloses wherein reading the log and applying the updates are executed after restoring the backup copy, (col. 8, lines 10-23).

As claim 27, Korn further discloses wherein the method further comprises reading a plurality of logs in parallel to derive updates subsequent to the merge end point and applying the updates to the restored database data set, (col. 6, lines 21-46).

As claim 29, Spiro further discloses wherein the method further comprises storing at least a portion of the detail records in a virtual memory, (col. 7, lines 55-68).

As claim 30, Spiro further discloses wherein the method further comprises generating a query to prompt for a detail record associated with the database data set, (col. 8, lines 58-65).

As claim 31, Spiro further discloses wherein the method further comprises saving the query if the detail record has not yet been read and responding to the query by applying the detail record to the backup copy if the detail record has been read, (col. 8, lines 58-65).

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Contact Information

5. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam V Nguyen whose telephone number is (703) 305-3735. The examiner can normally be reached on 7:30AM-5:00PM.

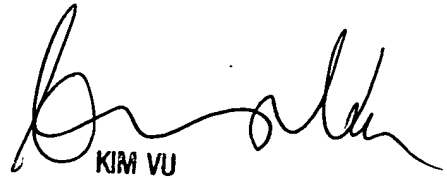
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Yen Vu can be reached on (703) 305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for formal communications and (703) 746-7240 for informal communications.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, Virginia 22202. Fourth Floor (Receptionist).

6. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

TV:tv

9/2/03


KIM VU
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